

**NON-RADIOACTIVE AIR EMISSIONS
NOTICE OF CONSTRUCTION APPROVAL ORDER
CONDITIONS AND RESTRICTIONS
DE12NWP-001**

REGULATORY AUTHORITY:

Pursuant to the Washington State Department of Ecology (Ecology) General Regulations for Air Pollution Sources, Chapter 173-400 Washington Administrative Code (WAC), and Controls for New Sources of Toxic Air Pollutants, Chapter 173-460 WAC, Ecology now finds the following:

FINDINGS:

1. The United States Department of Energy proposes to modify their existing facility (Hanford) located in Richland, Washington.
2. A Notice of Construction (NOC) application was submitted on December 15, 2011. The application was found to be complete on December 21, 2011.
3. Hanford is an existing major stationary source that emits more than 250 tons of a regulated pollutant per year.
4. The proposed project consists of constructing a wastewater treatment system, referred to as the Lagoon Treatment System (LTS), to provide domestic waste treatment services for the Hanford Site.
5. The proposed project emissions are based on influent wastewater concentrations.
6. Emissions of criteria pollutants from the proposed project are below the Prevention of Significant Deterioration Significant Emission Rates.
7. Hanford is located in a Class II Area designated as "attainment" for the purpose of NOC permitting for all pollutants.
8. Air pollutant emission increases from the proposed project are below the *de minimis* levels in WAC 173-400-110(5)(d) with the exception of ammonia, chloroform, and 1,4-dichlorobenzene.
9. As proposed, the project would emit no Toxic Air Pollutants (TAPs) exceeding small quantity emission rates (SQERs) of WAC 173-460-150. All TAPs met the acceptable source impact levels (ASILs).
10. Best Available Control Technology (BACT) for this project has been determined to be operation of the LTS in conformance with good operating principles, standard industry practices, and conformance with an approved Operations and Maintenance (O&M) program as approved under WAC 173-240.
11. The proposed project, if constructed and operated as herein required, will provide BACT.

12. The proposed project, if operated as herein required, will be in accordance with applicable rules and regulations, as set forth in Chapter 173-400 WAC and Chapter 173-460 WAC, and the operation thereof will not result in ambient air quality standards being exceeded.

13. The project will have no significant impact on air quality.

THEREFORE, IT IS ORDERED that the project as described in said Notice of Construction application, and as detailed in emissions estimates and impact and control technology assessments submitted to the Washington State Department of Ecology in reference thereto, is approved for construction, installation, and operation, provided compliance with the conditions and restrictions described below. This Order shall be identified as NOC Order **DE12NWP-001**.

1.0 APPROVAL CONDITIONS

1.1 Effective Date

The effective date of this authorization shall be that as signed in Section 5.0. All references to procedures or test methods shall be to those in effect as of the effective date of this ORDER.

1.2 Emission Limits

1.2.1 All TAPs, as submitted in the Permittee's Notice of Construction Application (Table 1), shall be below their respective ASILs.

Table 1: Toxic Air Pollutants from the Lagoon Treatment System (DE12NWP-001)

Chemical Name	CAS #	ASIL ($\mu\text{g}/\text{m}^3$)
1,4-Dichlorobenzene	106-46-7	0.0909
Chloroform	67-66-3	0.0435
Ammonia	7664-41-7	70.8

1.3 Compliance Demonstration

1.3.1 Compliance with Approval Condition 1.2.1 shall be demonstrated by using surrogate wastewater sampling conducted annually (once per calendar year) as described in Section 3.0.

1.3.2 Compliance with Approval Conditions 1.2.1 shall be demonstrated through operational record keeping provisions of Section 2.3.

2.0 NOTIFICATIONS AND SUBMITTALS

2.1 Addressing

Any required notifications and submittals required under these Approval Conditions shall be sent to:

Washington State Department of Ecology
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, Washington 99354

2.2 Operational Notice

Notification will be made at least ten (10) days prior to the Lagoon Treatment System becoming fully operational. This notification may be sent by email to the Nuclear Waste Program and/or to the address listed in section 2.1.

2.3 Recordkeeping

Specific records shall be kept on the Hanford Site by the Permittee and made available for inspection by Ecology upon request. The records shall be organized in a readily accessible manner and cover a minimum of the most recent sixty (60) month period. The records to be kept shall include the following:

1. Records of maintenance activities performed in accordance with the Operations and Maintenance (O&M) program as approved under WAC 173-240.
2. Laboratory analysis result summaries taken in accordance with these approval conditions for wastewater concentrations for pollutants listed in Table 2.
3. Laboratory analysis result summaries taken in accordance with these approval conditions of any samples undertaken after the effective date of this ORDER from the LTS which are examined for organic species or other TAPS.

2.4 Reporting

Results of wastewater sampling conducted pursuant to Section 3.0 shall be submitted to Ecology within ninety (90) days of completion of validated laboratory analysis results of such assessment if any pollutant concentration exceeds Table 2 values.

Notification of identification of any TAP not previously identified within the Notice of Construction Application emissions estimate shall be submitted to Ecology within ninety (90) days of completion of validated laboratory analyses and shall include WATER9 modeling which verify/quantify emissions of that toxic air pollutant from the project.

3.0 EMISSION MONITORING

The following sampling and monitoring are required in order to verify emissions estimates and compliance with Section 1.2.1, above.

3.1 Baseline Assessment

A baseline assessment shall be conducted within ninety (90) days of commencement of operations of the LTS for each of the three applicable TAPs in Table 2 (Ammonia, Chloroform, and 1,4-dichlorobenzene). As the estimated air emissions have been calculated from liquid wastewater influent concentrations, sampling and analysis for Table 2 pollutants in the influent stream will be in accord with an EPA approved method in 40 CFR Part 136.

Table 2: Lagoon Treatment System Wastewater Influent Concentrations

Pollutant	Wastewater Influent	
	Concentration	Units
Ammonia	60	mg/L
Chloroform	50	µg/L
1,4-dichlorobenzene	135	µg/L

3.2 TAPs Emission Assessment using Surrogate Wastewater Concentrations

Permittee will develop and implement an annual sampling and analysis plan (SAP). Each SAP shall address the collection of the wastewater sample between the wastewater truck discharge point and the truck unloading chamber. To minimize potential pollutant loss due to agitation and timeliness, the sample location must be before significant agitation of the wastewater stream occurs and before any holding chamber. Analytical methods for the analyses shall be in accord with an EPA approved method in 40 CFR Part 136.

4.0 APPROVAL ORDER AND RESTRICTIONS

Operation of the subject Lagoon Treatment System is only intended for domestic waste treatment services for the Hanford Site. For the purposes of this Authorization, "domestic waste treatment services" includes two waste streams:

- Primary waste stream consisting of raw wastewater hauled from holding tanks and flows from the Hanford Site sewer collection systems
- Secondary waste stream consisting of hauled septage from outside of the LTS and sludge solids diverted from the LTS settling lagoons

5.0 GENERAL CONDITIONS

All plans, specifications, and other information submitted to the Department of Ecology relative to this project and any authorizations or approvals or denials in relation thereto shall be incorporated herein and made a part thereof.

- 5.1 Availability of Order and O&M Manual:** Legible copies of this Order and the O&M manual shall be available to employees in direct operation of the LTS, and be available for review upon request by Ecology.
- 5.2 Discontinuing Construction or Operations:** It shall be grounds for rescission of this approval if physical construction or operation is discontinued for a period of eighteen (18) months or more. Ecology may extend the 18-month period upon request.
- 5.3 Compliance Assurance Access:** Access to the source by representatives of Ecology or the EPA shall be permitted upon request. Failure to allow such access is grounds for enforcement action under the federal Clean Air Act or the Washington State Clean Air Act, and may result in revocation of this Approval Order.
- 5.4 Equipment Operation:** Operation of the LTS and related equipment shall be conducted in compliance with all data and specifications submitted as part of the NOC application and in accordance with the O&M manual, unless otherwise approved in writing by Ecology.
- 5.5 Activities Inconsistent with the NOC Application and this Approval Order:** Any activity undertaken by the permittee or others, in a manner that is inconsistent with the NOC application and this determination, shall be subject to Ecology enforcement under applicable regulations.
- 5.6 Obligations under Other Laws or Regulations:** Nothing in this Approval Order shall be construed to relieve the permittee of its obligations under any local, state or federal laws or regulations.
- 5.7 Modifications:** Any modifications to the LTS system's operating and maintenance procedures, contrary to information in the NOC application, shall be reported to Ecology at least 60 days before such modification. Such modification may require a new or amended NOC Approval Order.

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

This Authorization may be modified, suspended, or revoked in whole, or in part, for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this authorization;
2. Obtaining this authorization by misrepresentation, or failure to fully disclose all relevant facts.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provisions of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances, and the remainder of this authorization, shall not be affected thereby.

The New Source Review Fee has been assessed according to WAC 173-455. No approval of a permit or service for any activity covered in this Order will be valid until the required fee is paid in full.

DATED at Richland, Washington, this 12th day of January 2012.

REVIEWED AND PREPARED BY:

Philip Gent, P.E.

APPROVED BY:

Jane A. Hedges